

Week 5 Math Number Lines - Family Activity

Welcome to week 5! This week we are starting with a fun activity to show that numbers can be shown on a numberline. Remember for math, **choose a day of the week to do your family math activity, 3 days of work on your core math curriculum and at least 2 times a week to work on ST Math or your preferred online math program.** If you prefer a non-computer option, play a math or logic game. The resource library has a wide variety of math games to check out.

Reminder: This is a Power Standard Activity, so you may want to save your work and submit it to your ES. You can do this by video-taping your students doing the activity, or having them write down their results. As another option, you can turn in the designated student work pages from their home learning curriculum instead.

Learning Targets

- Learn that numbers can be represented on a number line.

Preparation:

- This is a lesson that can be done on paper or outside with sidewalk chalk.
- Read through the lesson - This lesson can be done together, but each grade level has different things to accomplish. Some of the children will need you to act as a scribe or have you play a game with them.

Set-Up:

- There are video links to help the kids learn a concept if it might help them complete the activity. The video links are optional.

Materials in your copies packet:

- None this week

Other:

- Sidewalk Chalk (on a warm day) or pencil and paper
- Kindergarten - A dice
- 1st grade - pile of small objects: ie cheerios, legos, etc
- 3rd Grade: 1-C, $\frac{1}{2}$ C, $\frac{1}{3}$ C and $\frac{1}{4}$ C measuring cups, something else that is 1 cup in size (you can use another measuring cup or children's bowls and cups are often around that size).
- 4th Grade 1-C, $\frac{1}{2}$ C, $\frac{1}{4}$ C and $\frac{1}{8}$ C measuring cups (or 2 Tablespoons), and a Tablespoon, something else that is 1 cup in size (you can use another measuring cup or children's

bowls and cups are often around that size).

- 6th Grade- A dice

Lesson:

TEACH:

Today we are going to make a number line. Here is a picture of a number line that a different child made on the sidewalk.



Activity:

Kindergarten:

Watch [THIS VIDEO](#)

Complete this activity:

Draw a long line on the sidewalk with your chalk (or on your paper). Label the beginning 0 and then mark out the numbers 0 - 20. Have the child say the numbers as they write them (with your help as necessary). Roll a dice and have them go stand on the number and then say the numbers they step on as they walk to the end of the line. (If on paper, they can use their fingers to “walk” along the number line.

First Grade:

Watch [THIS VIDEO](#)

Complete this activity:

Have your student make a number line that goes all the way to 120. (You could teach them to write every tenth number with tick marks in between - so they only write the numbers 10, 20, 30, etc...) Have them pull out a handful of small items (i.e. cheerios or pennies) and then go to that point on the number line.

Second Grade:

Watch [THIS VIDEO](#)

Complete this activity:

Make a number line that goes to 100 (as described in the first grade instructions). Have the child use the number line to solve addition and subtraction problems using the number line within a 100. Here are some examples, but feel free to make up your own (What is $34+63$, $80-35$, $25+41$, $99-50$, $50-34$, $16+70$?) Give them time to go to the first number and step up the right number of steps for an addition problem or down the right number of steps for a subtraction problem.

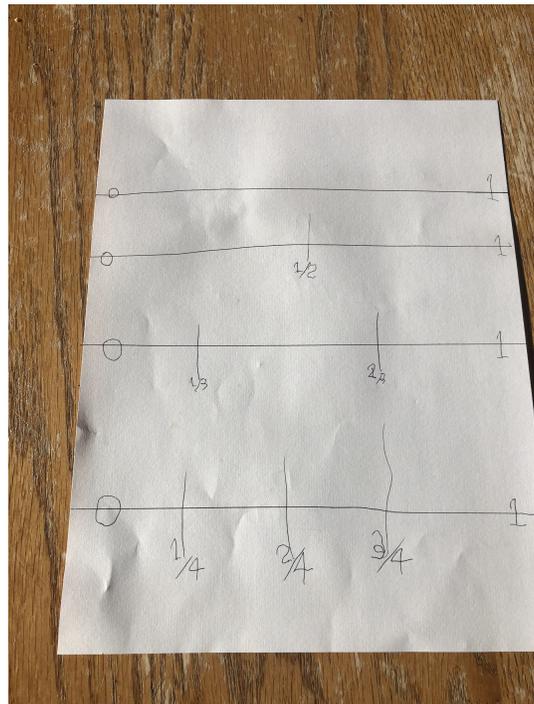
Third Grade:

Watch [THIS VIDEO](#).

Complete this activity:

Draw four lines on your paper (or sidewalk). On each of them label the two ends 0 and 1. You are going to split each line up into the number of measuring cups you need to fill the 1 cup. (the more careful you are filling the cups, the better this works).

- Fill the 1 C measuring cup up with water and pour it into the 1 C container. How many times did you have to fill it up. Split your line into that many times. (You don't need to split the first one - so nothing changes)
- Fill the $\frac{1}{2}$ C measuring cup up with water and pour it into the 1 C container. How many times did you have to fill it up, split your line into that many times? (They will draw one line in the middle of the line and label it $\frac{1}{2}$ because they used the $\frac{1}{2}$ measuring cup to get half-way across and then again to get to 1. That is already labeled so they don't need to label it again.)
- Fill the $\frac{1}{3}$ C measuring cup up with water and pour it into the 1 C container. How many times did you have to fill it up, split your line into that many times. (They will draw two lines on the line and label the first one $\frac{1}{3}$ because they used the $\frac{1}{3}$ cup once to get that far and the second one $\frac{2}{3}$ because they used two $\frac{1}{3}$ cups to get that far and they don't need to label the $\frac{3}{3}$ because it is already labeled).
- Fill the $\frac{1}{4}$ C measuring cup up with water and pour it into the 1 C container. How many times did you have to fill it up, split your line into that many times. (They will draw three lines on the line and label the first one $\frac{1}{4}$ because they used the $\frac{1}{4}$ cup once to get that far and the second one $\frac{2}{4}$ because they used 2 - $\frac{1}{4}$ cups to get that far (they can also label this one $\frac{1}{2}$)



(This is how it would look on paper)

For more online practice plotting fractions on a number line: [Khan Academy - Fractions on a Numberline](#)

Fourth Grade:

Watch [THIS VIDEO](#)

Complete this activity:

You are going to do the same activity as third grade (see instructions above). This time you don't need to use the $\frac{1}{3}$ C. Instead use 1 Cup, $\frac{1}{2}$ Cup, $\frac{1}{4}$ Cup $\frac{1}{8}$ Cup (or two tablespoons) and $\frac{1}{16}$ C (one tablespoon). Try to find as many equivalent fractions as you can. How can you tell they are the same?

(Note to Parents: The goal this time is to figure out which fractions are equivalent to each other, for example $\frac{1}{2}$ and $\frac{2}{4}$ will be in approximately the same place (depending on their precision in drawing the graphs).

For more practice:

[Khan Academy Equivalent Fractions](#)

Fifth Grade:

Watch [THIS VIDEO](#)

Complete this activity:

Build a number line from 0 - 5. You can make it on the sidewalk, make your own or use the one below. Take turns with your partner, making and solving problems. For example: What is $4\frac{1}{4} - 1\frac{1}{2}$? or What is $1\frac{1}{2} + 1\frac{1}{2}$. If you have made it out of chalk you can move up or down the given amount until you get to your answer. If you are doing it on paper, you can use your finger to move up and down. Make up five problems each.

For more practice:

[Adding and Subtracting Mixed Numbers with regrouping](#)

This section is built upon understanding of many steps of fraction addition and subtraction. If you find that it isn't making sense or you want more practice of the underlying principles. I recommend this section of Khan academy (keep working through the section until you feel comfortable adding and subtracting fractions. [Khan Academy Fractions](#) and these videos on Math Antics: [Mixed Numbers Adding and Subtracting Fractions](#), [Adding Mixed Numbers](#)

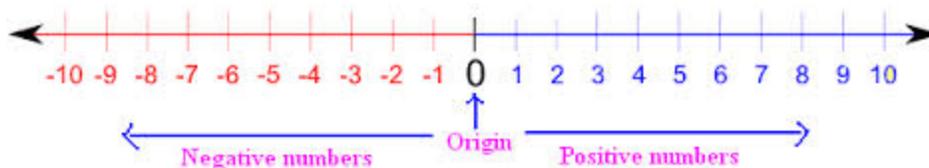


Sixth Grade:

Watch [THIS VIDEO](#)

Complete this activity:

You get to make a really creative number line. If one of your siblings has made a number line already you can just add onto it in the opposite direction, so starting at 0 you would go left and write negative numbers. So your number line will look something like this:



Start at zero. Roll a dice and add that many numbers to the number you are on. (for example if you are standing on 0 and you roll a five, then you will move to number five). The second time you roll your dice you will subtract the number on the dice (so if you roll a six you would move backwards six, if you were on number five then you would move left to -1). Go back and forth between adding and subtracting the number you roll. See how many rolls you can make until you move off the numberline.

For more practice, try <https://www.khanacademy.org/math/arithmetic-home/negative-numbers>

Discuss:

When everyone is finished, bring the family back together to have a discussion, let the kids have a chance to tell each other what they did on their number line and what they learned. The kids might want a chance to play each other's games.